

What Is Claimed Is:

1. A jet aircraft comprising:
  - a jet engine mounted in a forward portion of the aircraft;
  - a thrust deflection assembly provided rearward of the jet engine, the thrust deflection assembly including a cascade and control box for deflecting thrust during vertical flight of the aircraft, wherein the cascade is movable between a retracted position and deployed positions and whereby manipulation of the cascade and control box controls roll, yaw and pitch of the aircraft during vertical flight;
  - conventional control elements for controlling roll, yaw and pitch of the aircraft during forward flight;
  - a pilot control input apparatus, which receives pilot input regarding desired roll, yaw and pitch of the aircraft; and
  - a control mixer, operatively associated with the pilot control input apparatus, for controlling the cascade, control box and conventional control elements in accordance with the desired roll, yaw and pitch of the aircraft,
  - wherein the pilot uses the same control input apparatus for vertical and forward flight.
2. The aircraft of claim 1, wherein the thrust deflection assembly includes at least two control boxes.
3. The aircraft of claim 1, wherein the control box includes a plurality of vanes for controlling roll of the aircraft.
4. The aircraft of claim 1, wherein the thrust deflection assembly includes a plurality of doors, which cooperate with the cascade to direct thrust to the control box.
5. The aircraft of claim 1, wherein the thrust deflection assembly is mounted for movement such that it may be selectively moved into and out of a thrust from the jet engine.
6. The aircraft of claim 1, wherein the control mixer is mechanically linked to the pilot control input apparatus.

7. The aircraft of claim 1, wherein the control mixer is electronically linked to the pilot control input apparatus.
8. The aircraft of claim 7, wherein the control mixer is electronically linked to the pilot control input apparatus via a wireless link.
9. The aircraft of claim 7, wherein the control mixer is electronically linked to the pilot control input apparatus via a wired link.
10. The aircraft of claim 1, wherein the control mixer is mechanically linked to the control box.
11. The aircraft of claim 1, wherein the control mixer is electronically linked to the control box.
12. The aircraft of claim 11, wherein the control mixer is electronically linked to the control box via a wireless link.
13. The aircraft of claim 11, wherein the control mixer is electronically linked to the control box via a wired link.
14. The aircraft of claim 1, wherein during vertical flight, pitch is controlled by rotating the control box around an axis perpendicular to a longitudinal axis of the aircraft.
15. The aircraft of claim 1, wherein the thrust deflection assembly includes at least two control boxes, and during vertical flight, yaw is controlled by differentially moving the two control boxes.
16. The aircraft of claim 1, wherein the control mixer further comprises a mechanical converter assembly, which bifurcates input from the pilot control input apparatus and is mechanically linked to the control box.
17. The aircraft of claim 1, wherein the thrust deflection assembly includes at least two control boxes and each control box includes a plurality of vanes for controlling roll of the aircraft.

18. The aircraft of claim 17, wherein the thrust deflection assembly includes a plurality of doors, which cooperate with the cascade to direct thrust to the control box.
19. The aircraft of claim 18, wherein the thrust deflection assembly is mounted for movement such that it may be selectively moved into and out of a thrust from the jet engine.
20. A jet aircraft control system, comprising:  
means for directing flight during vertical flight;  
means for directing flight during forward flight, and  
input means for receiving a pilot's input regarding desired roll, yaw and pitch of the aircraft;  
wherein the pilot uses the same input means for vertical and forward flight.